

What is already known on this topic

Quantitative studies have identified problems in the use of medicines for elderly patients, including inappropriate prescribing, counselling of patients, and transfer of information between primary and secondary care

There are limited qualitative data on the processes underlying inappropriate use of medicines in older inpatients

What this study adds

Reliance on general acute care and short term treatment, passive attitudes towards achieving learning outcomes, and paternalistic decision making contribute to inappropriate use of medicines in elderly patients

The input of geriatricians and communication between members of a multidisciplinary geriatric team contributed to a better use of medicines

(factors relating to the learning attitude and to relationships between prescribers). Strategies for improvement should include developing incentives for chronic considerations and for active learning in geriatrics by junior doctors^{12 13}; developing systems for reliable transfer of information; increasing involvement of patients; and encouraging communication between prescribers.

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Self reported health and mortality: ecological analysis based on electoral wards across the United Kingdom

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The question in the UK 1991 census that asked respondents whether they had a limiting long term illness proved useful for allocating health service funding.¹ In the 2001 census a question on general health in the previous year was added to improve further the understanding of health needs and refine resource allocation. However, these indicators differ from objective measures of health in that they are also dependent on the perception of, and propensity to report, health problems. We explore the relation between the self reported responses to the two census questions cited above and mortality across the UK regions.

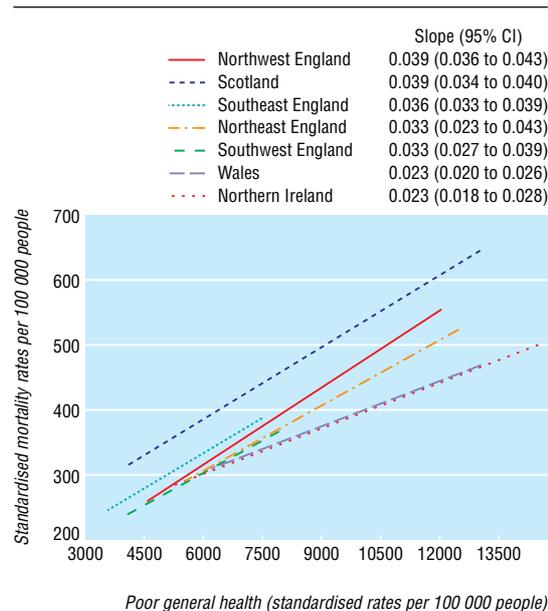
Methods and results

We derived three indicators of health for each of 10 604 UK electoral wards. Pooled all cause mortality rates for 2000-2 were generated for the English, Scottish, and Welsh wards. For Northern Ireland, where wards are

smaller, we pooled data for 1998-2002. We derived two morbidity indicators from the self report health questions in the 2001 census: the proportion of ward respondents reporting limiting long term illness and the proportion reporting that their general health in the preceding year was "not good." All rates were directly standardised for age and sex to the European standard population aged 0-74 years.

The correlation between limiting long term illness and poor general health at ward level was 0.97, so we present results for general health only. Findings relate equally, however, to limiting long term illness. The relation between self reported health and mortality at this aggregate level was tested by linear regression using robust standard error estimation in STATA to adjust for clustering of wards within local authorities. This showed a significant interaction effect between region

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Regression lines showing relation between mortality and general health in people aged 0-74 years in selected countries and regions in United Kingdom

and general health ($F = 9.19$, $df = 11, 433$; $P < 0.001$) so we did regression analyses stratified by region. The figure shows the regression lines plotted between the 10th and 90th centiles of the self reported general health distribution within each region. Levels of self reported general health were worst in Northern Ireland, followed by Wales, Scotland, then northern England; mortality was highest in Scotland and northern England; mortality was lowest and general health best in southern England. The relation between general health and mortality varied substantially between regions: for a given level of self reported general health, mortality rates in Scotland were a third higher than in Northern Ireland or Wales. Inclusion of deprivation and long term unemployment rates as confounders in the regressions reduced the slope in all regions by as much as half, but differences between regions remained significant ($F = 7.08$, $df = 11, 433$; $P < 0.001$).

Comment

This analysis suggests that self reported health may be an unreliable way of comparing health needs between regions. It extends previous research on regional variation of limiting long term illness in England and Wales,² presenting a more complete picture of the complexities in using self reported morbidity measures than recently reported.³

Differences between self reported health and more objective measures such as mortality may arise because the former is sensitive to conditions that are poorly reflected by mortality. Alternatively, mortality patterns may reflect the morbidity of previous decades while self reported health reflects current morbidity. Beatty and colleagues suggested that health perception is worse in areas of high unemployment—for example, in the older industrial and mining regions of Britain—where people progressively classify themselves as incapacitated as their chances of finding work diminishes.⁴

What is already known on this topic

Concerns have been expressed about using self reported measures of health as an indicator for needs assessment and in resource allocation formulas as they reflect both health experiences and health expectations

What this study adds

The relation between self reported health and mortality varies substantially across the United Kingdom, and this raises concerns about using self reported health as a tool for resource allocation

However, the distribution of the regression lines and the failure of additional adjustment for deprivation and unemployment in the model to explain the variation between regions suggests that socioeconomic factors are not a major explanation.

Salomon and colleagues have proposed “anchoring” vignettes describing fixed levels of health as a way of identifying and overcoming differences in both health expectations and reporting biases between populations.⁵ Such vignettes might make these morbidity measures more suitable for resource allocation formulas.

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Endpiece

Sanitas sanitatum

There is a great mistake in the Vulgate...the Latin translation of the Holy Scriptures, and that instead of saying “Vanity of vanities, all is vanity” – *Vanitas vanitatum, omnia vanitas*, the wise and witty king really said, *Sanitas sanitatum, omnia sanitas*. Gentlemen, it is impossible to overrate the importance of the subject. After all, the first consideration of a Minister should be the health of the people.

Benjamin Disraeli, 1872. Cited by Sir Humphry Rolleston. The progress and pioneers of preventive medicine. *Ann Med Hist* 1934;6:95

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